Note.—The application for a Patent has become void.

This print shows the Specification as it became open to public inspection on May 1, 1933, under Section 97 (3) (a) of the Patents and Designs Acts, 1907 to 1932.

PATENT SPECIFICATION

Application Date: Oct. 31, 1932. No. 30,527/32. **414,631**

Complete not Accepted.

COMPLETE SPECIFICATION.

Bolt Retainer.

I, HERMANN FACKLAM, of Drottninggatan 66, Stockholm, Sweden, a subject of the King of Sweden, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a bolt retainer, that is an arrangement for retaining bolts, nails, screws and the like in materials of different kinds, such as concrete, stone, brick, marble, glass, wood and the like. For such purposes it has been proposed to use a metal-sleeve with edge-shaped corrugations, a threaded bolt member projecting into said sleeve and a wedge-member having threaded engagement with said bolt member and a frictional engagement with said sleeve. By using this bolt-retainer it is always necessary to have a bore of right diameter in the material beforehand. For the same purpose it has also been used a cone-shaped metal-sleeve, provided with elevations, said sleeve beeing inserted in a bore in the material, a wood-plug being inserted in said sleeve and a nail or screw being inserted in said plug.

The aim of this invention is to simplify and improve the existing arrangements in such a way that a safe engagement can be obtained with very simple means. The arrangement according to this invention consists of a sleeve, preferably of sheet-iron longitudinally split-up and provided with corrugations of almost constant height preferably longitudinally along the sleeve. In using this new and improved bolt retainer for anchoring a bolt, nail, screw or the like in hard material a bore of suitable diameter is made in the material, the corrugated sleeve is inserted in the bore. The bolt which is of larger diameter than the inner diameter of the sleeve is inserted into the sleeve, the corrugations of said sleeve being pressed against the inside of the bore and the inside of said sleeve being pressed against the bolt, nail screw or the like which thereby is effectively engaged in the bore with the material. In soft material the sleeve can be hammered directly in the material without making a bore beforehand, the material inclosed in the sleeve then being removed in order to give place to the bolt, nail or screw. Said member can be provided with a head formed in a suitable manner for engaging the object to be anchored in the member.

In order to explain this invention more fully reference is made to the accompanying drawing, in which

Fig. 1 is a cross section of the sleeve,

Fig. 2 is a lateral view of the same,

Fig. 3 is a longitudinal section of the corrugated sleeve inserted in a wall with a bolt in the sleeve in elevation.

The corrugated sleeve 1 is split-up longitudinally. The corrugations 2 are of the same height longitudinally. The outer end of the sleeve may alternatively be without corrugations and a little wider than the inner diameter of the sleeve as shown in 3 in Fig. 2, in order to facilitate the insertion of the bolt in the sleeve. The diameter of the bolt shall be a little larger than the inner diameter of the sleeve. 5 is a bolthead for engaging the object to be anchored. The sleeve can also be round and not corrugated at the former end, that is the end which is first inserted in the material.

It is to be observed that although in the drawing the corrugations are shown to be straight they may alternatively extend along the sleeve in other manner for instance more or less spirally or as a screw thread, the main feature of the invention residing in the fact that the sleeve is split-up and provided with projections adapted to engage with the material in combination with a bolt without using any auxiliary means for anchoring the bolt.

In material with a tendency to surface

[*Price* 1/-]

cracking a safe engagement can be obtained by insertion of a short corrugated sleeve of a smaller diameter inside and in the former end of the corrugated sleeve of the bolt retainer, the shorter sleeve being pressed against the outer sleeve by a wedge-shaped end of a screw, bolt, nail or the like. The corrugations of the inner sleeve should fit into the corrugations of the outer sleeve, and also the inner sleeve being split-up.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Retaining means for bolts, nails screws or the like in concrete, cement, stone, marble, glass, wood and the like consisting of a sleeve split-up in longitudinal direction and provided with projections adapted to engage with the material.

2. Retaining means according to claim 1 provided with corrugations extending essentially in the longitudinal direction of the sleeve.

3. Retaining means according to claim 1 and 2 provided with projections, one or both ends of the sleeve being without projections.

4. Retaining means according to claim 1, 2 and 3 provided with projections, one end of the sleeve being widened in diameter.

5. Retaining means according to claim 1, 2, 3 and 4 provided with projections of almost constant height.

6. Retaining means according to claim 1, 2, 3, 4 and 5 in the sleeve of the bolt retainer being inserted in the former end a shorter, split-up sleeve of smaller diameter, provided with corrugations fitting into the corrugations of the outer sleeve, the inside sleeve being pressed against the outer sleeve by way of a wedge-shaped end of a screw, bolt, nail or the like.

Dated this 31st day of October, 1932.

MARKS & CLERK.

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Fig. 1.

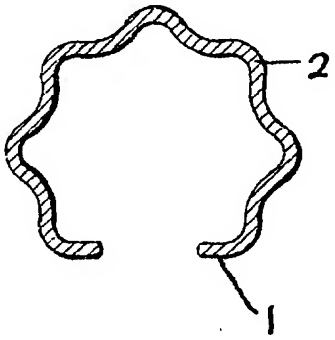


Fig. 2.

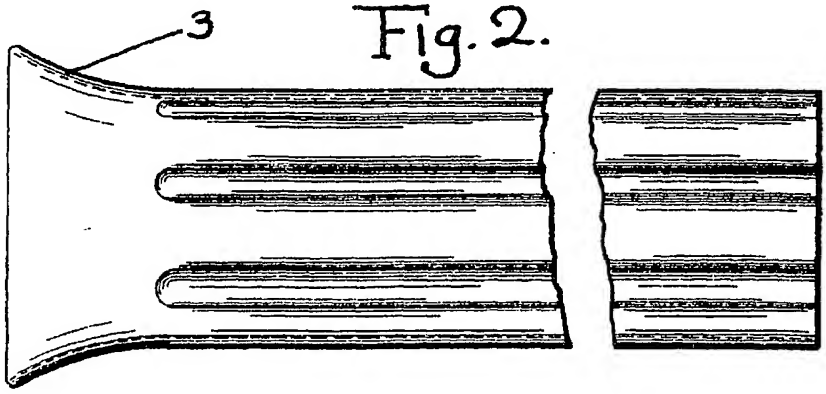
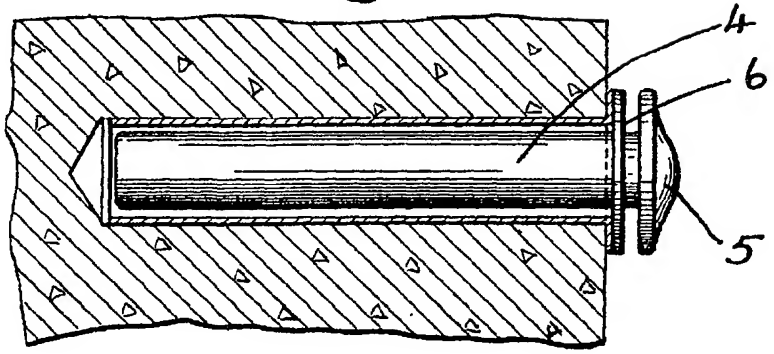


Fig. 3.



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